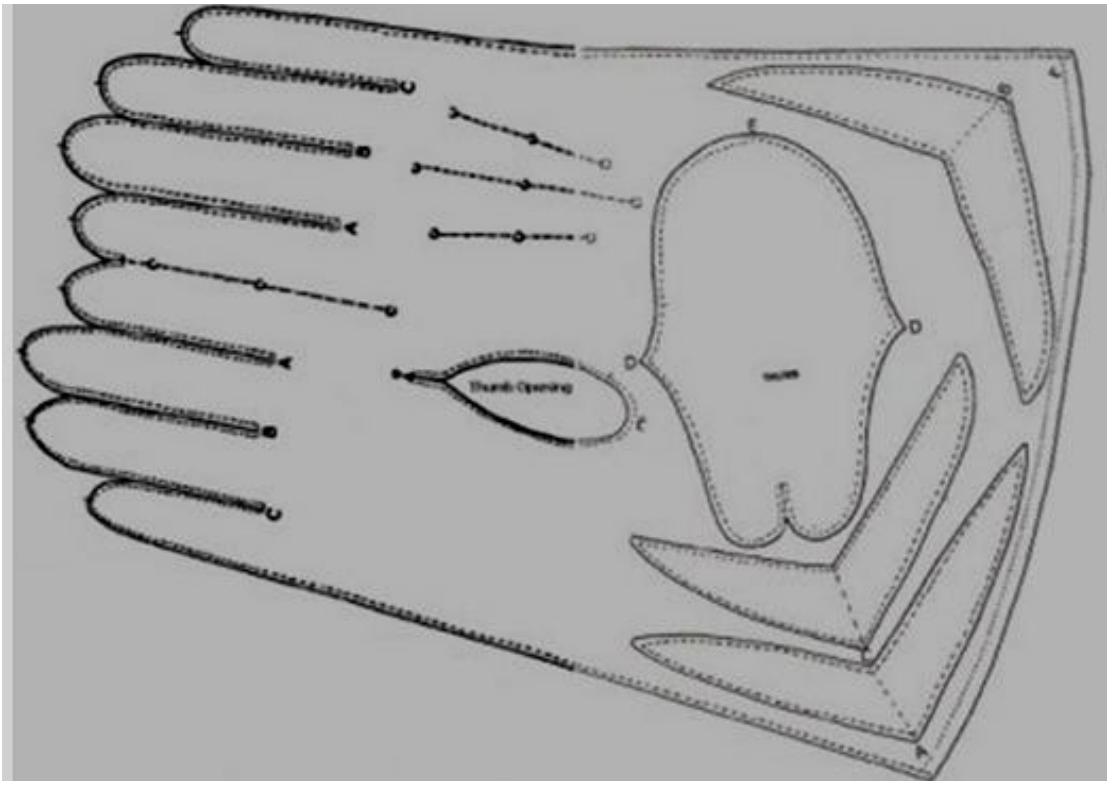
A Long-Term Survival Guide - How To Make Survival Gloves:

In any long-term survival scenario, you will probably be doing a lot of manual labor tasks, such as cutting your own firewood, setting traps, and building shelters. Knowing how to make gloves is an important survival skill, for times when you can't buy them. Wearing warm gloves (or mittens) is the only way to keep your hands functional in extreme cold, and to protect your hands from injury.

Improvised gloves (these were made from animal furs) are vital winter survival gear.



This is the standard pattern, for one glove. This pattern is drawn onto a piece of leather, animal skin, or a fur pelt, and then it is cut out and folded over, to make the basic glove body. The shapes on the right side are the thumb section, and the three finger gussets, which are cut from any extra material (they are only drawn on the cuff of the glove pattern to save space on the pattern paper). No measurements are shown here, because the actual sizes will be different for every person.

Fur mitts are even easier to make than gloves, under primitive survival conditions.

Basically, the way to make a pair of gloves is:

Lay your hand on a piece of material, then trace around it (just the fingers and palm, not the thumb), allowing extra material for the seams. Make a second tracing, next to the first (using the other hand, so it will be a mirror-image shape), to complete the pattern shown on page one. Be sure to leave plenty of extra material for the cuffs (which can be made as short or as long as you prefer).

Mark a thumb hole, in the location shown in the pattern sketch. Measure and cut three gussets for each hand, to sew in between the fingers (The gussets lay in a "V" shape, between the fingers.). Mark which gussets go where, to avoid getting them mixed up during the assembly.

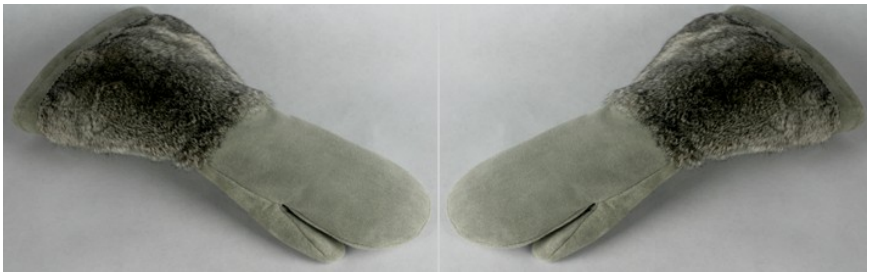
Cut out two complete sets of pieces, for two gloves. Sew all of the pieces together, checking the fit as you go along. Cut out the thumb hole first, so the thumb can go into the hole, while test fitting.

Sew the separate thumb pieces together, test the fit, and sew them onto the completed gloves last.

Make your first set of gloves out of scrap material, if possible, to avoid wasting good material.

If you will be making a lot of gloves, you may want to make a set of standard patterns for each person, for future reference.

Gloves can also be made with attached thumbs, if desired, but the separate thumb design gives more freedom of movement.



Survival mitts can be made faster and easier than gloves, but they give you less dexterity.

Good quality gloves can be made entirely by hand, even under primitive survival conditions.

Gloves made in factories are nearly always sewn on special machines, but you will find it much easier to sew glove seams by hand, rather than by trying to do it with a home sewing machine (but wrist edges often look better if they are stitched on a machine). An advantage to making gloves by hand is that each pair can be custom made, to perfectly fit the wearer for whom they are intended.

Leather gloves are, of course, the most hard-wearing of all. They keep their shape well and are warm and comfortable. When choosing leather for making gloves, remember that it must be supple, and fairly thin.

Most animal skins are suitable for making leather gloves, including deer, elk, sheep, calf, goat, pig, and many small game animals. But some, such as deer, are not good for making fur gloves, because the hair is too brittle (deer hair is hollow and brittle, and breaks off easily).

If you are in any doubt as to whether the skin you want will be large enough for the glove you want to make, you can always lay both hands on it, or lay the pattern over it.

Examine each skin carefully and avoid any leather which feels brittle or which has a very shiny surface. Hold it up to the light and note whether there are many thin places. If there are, do not use it, for you will find it will prove to be wasteful in cutting out, since you will have to avoid all the thin places. Look well at the edges of the leather, and pull it gently between your fingers. If the skin shows a tendency to tear and looks papery, do not use it, for it will be difficult to sew and will not last long.

Making gloves from bad material is a waste of time and effort. It is better to use inferior materials for simpler projects, such as survival mitts, then you can discard them after better gear is made.

Fur-backed gloves for winter use are extremely warm, and although they may take a little longer to make, they are well worth the extra trouble. The glove can also be made so that the fur is on the inside, which keeps it from being worn off during heavy use. Sheepskin and lamb's wool can be used for gloves, and the woolly side can be inside or outside the glove according to the taste of the wearer and the purpose for which the gloves are required.

Getting the Skin Ready: Roll the uncut skin tightly, lengthwise, wrongside out. Then place this firm roll of leather in a moist cloth (not drenched), and wind the cloth tightly around it. Do not permit the right side of the leather to get wet. Keep the skin in this manner from one to two hours.

Stretching the Skin: Remove the skin from moist cloth after an hour or two and proceed to stretch it along the edge of a table. This process must be thorough, and it takes a bit of strength. Letting more and more of the skin hang over the side of the table, pull it evenly, strongly, in the direction of the floor. In the wild, use the edge of a boulder, or work the skin back and forth over a branch.

Do this stretching several times, but only lengthwise (the direction that will be used as the length of the glove – you must decide this before starting). Do not stretch the skin along its width, or your gloves will tend to tighten up.

Fur Mitts can be made with the fur on the outside, or on the inside, as a lining.

Linings: Fur-lined gloves are made by using fur pelts as the glove material, with the fur on the inside of the glove. These gloves are warm, and they are not particularly difficult to make. The thing to remember is that the fur will take up a good deal of room inside the glove, and so the animal skin must be cut larger to allow for this.

Survival gloves should not be tight, because tight gloves will impede your blood circulation, and defeat the purpose of keeping your hands warm, which increases the chances of getting frostbite.

Tools: If you are making emergency gloves or mitts under primitive survival conditions, you may only have whatever tools you can improvise. If you don't have a way of marking the pattern onto your animal skin, you can still cut it out while holding one hand in place on the skin. If you don't have a knife, you can use a piece of broken glass, or a flake of sharp flint, or a bit of sharpened metal. If you don't have a needle, a crude one can be improvised from a nail, or a piece of bone. An improvised awl can be used to punch holes in the skin, to allow the lacings to be threaded through. If you don't have any thread, you can use animal sinew, or thin strips of gut, or rawhide. Don't give up just because you don't have the best tools available.

If you are making gloves at home, under normal conditions, the tools required are extremely simple and easy to obtain. Ordinary sewing needles are used for finer types of leather, or animal skins, while for thicker and tougher kinds you can buy three-sided gloving needles in various sizes: glove needles, sizes No. 6, No. 7, and No. 8. Size No. 6 is heavy and is used for men's gloves and women's gloves made of heavier leather. Size No. 7 is used for nearly all kinds of leather and size No. 8 for the thin and finest skins, such as kidskin, doeskin, etc.

Any thread can be used, also mercerized silk; any boil-fast embroidery yarn, if thin, taken in three threads. Other excellent thread: DMC No. 8 or No. 12, CB No. 8 or No. 12 or lustre No. 24 or No. 16. Certain parts of a glove can be sewn by machine and for this purpose No. 16 or No. 18 needle is recommended.

The thread you use will depend on the leather it is to sew. You can buy special gloving thread in several thicknesses and this is obtainable in most of the colors you are likely to need. Buttonhole twist can also be used. The chief thing to remember is that the thread, like the needle, must be thin enough to pass easily through the leather without dragging and must be strong enough to stand a good deal of wear without breaking. If you find that your needle tends to get bent, change it for a stronger one. Never use a bent needle for a stab stitch, as it is impossible to put it at right angles into the leather.

In addition to your needles and thread you will need a pair of very sharp scissors. These should be small enough to get round corners easily, but large enough to give smooth, even cuts. If you intend to make any fur or sheepskin gloves you will also need a razor blade or a really sharp knife, as fur should never be cut with scissors.

Any commercially-made gloves can be taken apart, and used as a pattern for making more.

When cutting out gloves it is usual to lay the pattern on the leather and draw all round it with a sharp pencil. Use a soft drawing pencil on light colored leathers and a white or yellow crayon pencil on leathers on which the black lead will not show. These latter pencils wear down very quickly so they must be sharpened frequently as you go along.

Wear a thimble whenever you can. It is also important to keep your leather flat, especially after it has been cut, avoiding unnecessary stretching or bending.

Leather gauntlet designs provide more protection than shorter gloves.

Glovemaking Terms: Making gloves is an old art, and has some odd terms:

Cabretta: A thin, fine leather made from the skin of a Brazilian sheep.

Cape or Capeskin: A superior thin leather made from the skin of a South African sheep.

Clute Cut: A glove style with a one piece palm with no seam at the base of the finger. There are seams along the fingers on the inside.

Cuff: The cuff is the part of the glove extending beyond the palm that covers the wrist and part of the forearm.

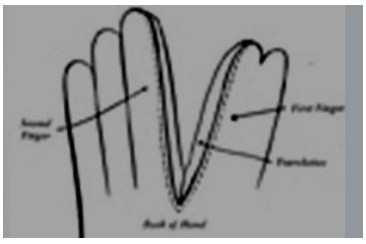
Fourchette: The long, narrow piece of leather sewn between the fingers on some kinds of gloves. Also called sidewall or gusset.

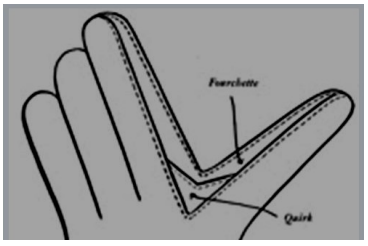
Gauntlet: A long cuff, used to protect the forearm. Longer gauntlets can help keep the hands and arms warm in winter conditions (by sealing out cold air from the gap between the glove and the sleeve), and can add an extra layer of protection to the forearms, to help avoid scrapes and injuries.

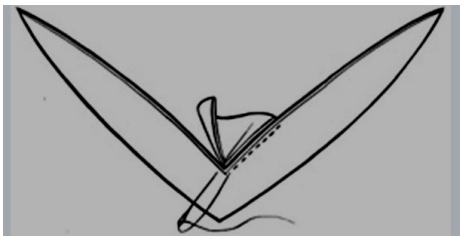
Grain: The side of the leather that had the hair, i.e. the outside. Full Grain has the original surface, whereas corrected grain has been abraded to make the leather smoother and more uniform.

Gunn Cut: A glove style with seams at the base of the fingers. The seams between the fingers are on the back of the glove.

Gusset: The piece of leather sewn between the fingers, on some kinds of gloves. Also known as the sidewall, or fourchette. There are three different kinds of fourchettes; singles, doubles, and doubles with quirks. Single ones are used when there are no triangular-shaped gussets at the base of the fingers. These tiny triangular gussets are called quirks, and they are sewn to double fourchettes. Leathers which possess a good deal of stretch are usually made without quirks, but if the leather is fairly thick and stiff the addition of quirks will give a little more room for the hand, and make the gloves wear better.







Points: The points are decorative lines on the back of the hand of the glove. Various methods and stitches can be used for these and they vary with the fashion of the day, if they are used at all.

Split: When a thick piece of leather is split into two thinner pieces, the top piece will have grain (Top Grain) and the bottom piece will be suede on both sides. The bottom piece is the split.

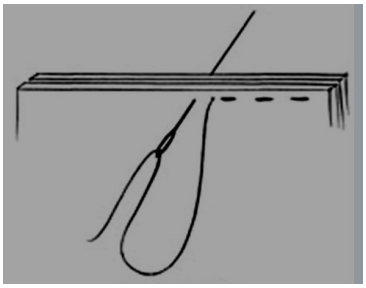
Trank: The main part of the glove, consisting of the back, the palm, the wrist and the backs and fronts of the fingers.

Welt: A thin piece of leather sewn into the seam to strengthen it. Often a welt is used in the seam at the crotch of the thumb and the base of the finger.

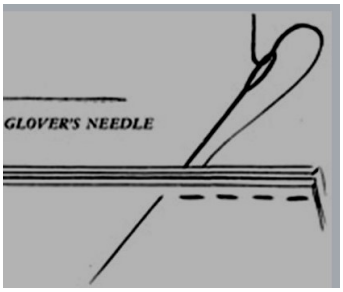
Survival gloves can be made with longer gauntlets, to add extra warmth and protection.

Stitches: The way in which a glove is sewn together is important both from the point of view of wear and appearance. Leather gloves are nearly always sewn on the right side (right side out), unless the leather is very thin. Fur is an exception to this, as the seams are usually over sewn on the wrong side (inside out). The final seams, however, are done on the right side.

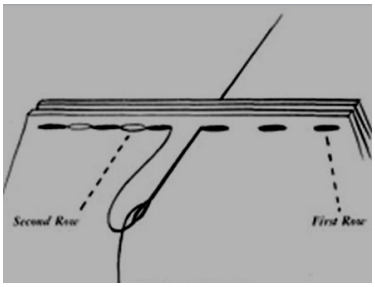
A close examination of a hand-made glove will soon show that the seams appear to be made using a running stitch (small even stitches that are the same size on each side of the seam). Actually the stitch used is called a stab stitch, and it is worked in a special way. The two pieces of leather are held together wrong sides facing and the edges absolutely level. The needle is then pushed straight through the two layers at a right angle, and the thread is pulled through.



First half of stab stitch



Second half of stab stitch

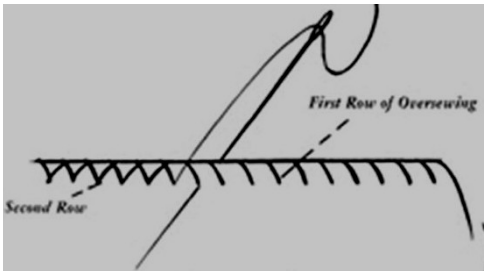


Double running stitch

The second half of the stitch is made by pushing the needle through from the back to the front, again with the needle at a right angle. Thus each stitch is made in two movements. Never try to use an ordinary running stitch, in which a small amount of the seam is pinched onto the needle, as even thin leather is too thick for this to be successful.

If you want your gloves to be extra strong you can use a double running stitch. The first half of the stitch is made by using a stab stitch in the ordinary way, then a second row of stab stitch is worked in the opposite direction, filling in the spaces left on the previous row. This stitch is extremely strong, and if well done it looks like machine stitching. The needle and thread used must both be fairly fine, as the needle goes through each hole in the leather twice.

Oversewing can be used either on the right or wrong side. Where extra strength is required, a second row can be worked in the opposite direction, to form a row of crosses. This stitch, if evenly worked, is very decorative and looks well if a contrasting color is used.



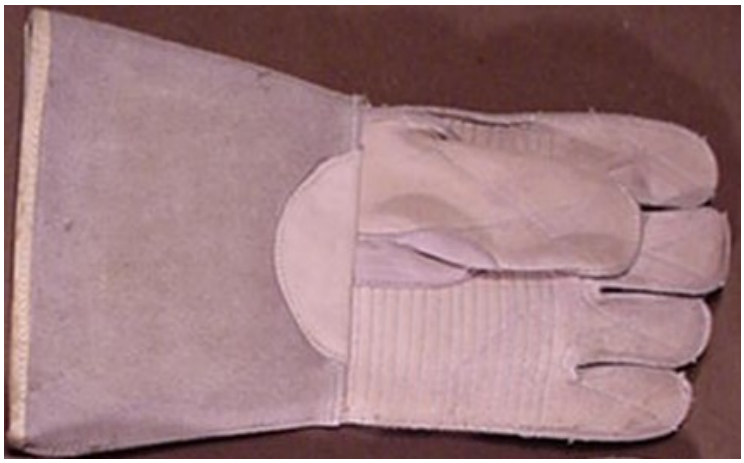
The oversewing stitch

Backstitching can be used for seams which are worked on the wrong side. Machine stitching can be used to good effect around the wrist edge of a glove as it is not only quicker than hand sewing, it helps to flatten and stiffen the edge. Decorative stitching can be used for the points. They can be worked in stab stitch, double oversewing (cross stitch) or herringbone stitch.

One drawback to sewing gloves by hand is that it is almost impossible to pin or baste the leather, as the holes made cannot be removed and not only spoil the appearance of the glove, but weaken the leather. For this reason you must be prepared to place and sew your seams at the same time. It means that you have to work rather slowly, although experience soon shows you the best way to go about it. Should you, for any reason, find it imperative to hold any particular seam in place as you work, use ordinary wire paper clips. Be very careful not to allow the points of the wire to scratch the surface of the leather.

Decorative Details: The decorative lines which can be used to adorn the back of cloth or leather gloves are called points. These points often form a design, and add much to the finished look of the glove. They are made while the trank is still flat. Most patterns give some indication as to where the points should begin and end.

The classic method for adding points is to put in three small tucks. These are worked either in stab stitch or by machine. The tucks should start just under the base of the fingers and end a little above the wrist. The two outer ones usually slope in a little towards the bottom.



The extra stitching on this barbed wire glove is for reinforcement, not decoration.

Many factory-made gloves have the three lines worked in machine stitch. Each line consists of three rows of stitching about one-sixteenth inch apart. The stitches must be very small and the lines must be perfectly straight. A row of crossed over sewing also looks well and is a little more definite than stab stitch tucks, especially if a contrasting thread is used.

Wrist Edges: The finishing of the wrist edge is an important part of glove making. Sheepskin gloves may be left as they are and, if the wool is used inside, the edge may be turned up to form a cuff. Alternatively the edge may be bound with a strip of leather.

Gloves made from ordinary leather may also have the wrist edge left as it is.

The simplest method of finishing a wrist edge is to turn up a single hem one-quarter inch deep on the wrong side and herringbone or machine it in place.

Another method is to turn up a single hem one-half inch wide or a little wider if the leather is thick, on to the right side. Stab stitch or machine stitch all round one-eighth inch below the folded edge. Turn the raw edge over on to the wrong side and hem it down. You can also bind the edge with a separate strip of leather.

Patterns: An important piece of equipment a glove maker needs is a reliable pattern, or rather, a series of patterns covering various sizes of gloves. The best patterns are made from thin cardboard, and they work well when you are marking your pattern onto leather, or an animal skin.

Army surplus trigger finger mitts are one of my favorite designs, for survival use.

Adapting a Pattern: People's hands vary very much both as to size and shape. Two people may both take size 6 1/2 in gloves, but whereas one may have long, thin fingers, the other may have short, stumpy ones. In addition to this there is a wide variation of the proportions between one finger and another. It is obviously impossible for the manufacturers of glove patterns to cater to all these differences. However, you will find that as long as a pattern is wide enough over the knuckles, you can make as many alterations as you like in the length.

When you buy a pattern open it out and lay your hand flat on it. Notice whether your fingers are longer or shorter than the pattern. If they are shorter, take a pencil and draw round the top of each finger, allowing for a seam of one-sixteenth of an inch. Trim off the pattern along your pencil lines. Should your fingers be longer than those of the pattern, glue a strip of paper to each finger, draw round your own fingers as before and trim off to the correct size.

One measurement which may need a little adjustment is the length of the slits between the fingers. Notice if each slit comes right to the bottom of the appropriate finger. If it does not, make it a little longer. If it is too long, put a pencil mark at the proper place and when you are marking out your glove remember to end the slit at this mark.

If you wish to use an ordinary glove pattern for making a pair of mittens simply leave out the slits for the fingers and cut the top edge into a smooth continuous curve.

When buying patterns consider the thickness of the leather you intend to use. A thick skin will give you a smaller glove than if you use the same pattern for a thinner skin. If you get a pattern that is suitable for a stretchable skin such as chamois you will find that it will be smaller than one labeled with the same size intended for a thicker and stiffer skin. For this reason it is wise to notice what sort of leather is suggested on the pattern before you buy it.

These military surplus arctic mitts are one of the best designs for use in extreme cold.

Making a Basic Pattern: Some people prefer to work from a basic pattern, which they adapt and alter as the need arises. This is a good idea, once you have acquired sufficient experience to judge what alterations are required. If you are a beginner, however, it is wise to use bought patterns at first, since a great deal can be learned from them.

To make a basic pattern to fit your own measurements, take a piece of drawing paper and lay your hand flat on it with the fingers closed. Draw all round the hand as far as the wrist on each side. Open each pair of fingers in turn and put a dot at the base of each. Join these dots to the top of the fingers with a ruler, making sure that all your lines are perfectly parallel. Lengthen the pattern by about two inches, sloping it out slightly on the edge opposite to the thumb.

Fold the paper in half along the edge of the index finger and cut it out in the double paper, making the slits between the fingers on the front of the hand one-quarter inch shorter than the corresponding slits on the back.

Cut out the hole for the thumb, and label it carefully. Using the pattern as a guide to the length of the thumb, cut out the thumb piece. Cut the slit, and label the thumb.

Cut out your fourchette and quirk patterns, making sure that the fourchettes are equal to the longest finger. When you are sure your pattern is as accurate as you can make it, trace it on to a piece of stiff paper or thin card and cut it out carefully. Mark the pattern as being for the correct hand. Store your pattern in a large strong envelope, with as few folds as possible.

Once you can make your own gloves, you can customize them any way you want.

Storing Patterns: Patterns should always be kept as flat as possible. Keep all the pieces of a pattern together with the directions in the envelopes and add any details you may wish to remember. Store all your envelopes in a flat box where the patterns will not get creased. If you should have the misfortune to tear a pattern, it can be mended quite easily with Scotch tape.

Mending Gloves: Properly made gloves will last for a long time, especially if you have been careful to see that they fit well. There does come a time, however, when seams come apart and the gloves need mending.

If this happens, the obvious thing to do is to use similar thread to that with which the glove was originally sewn, and simply resew the seam. Go well past the ends of the split at the beginning and end and be sure to fasten off firmly.

Sometimes an actual hole may be worn in the gloves, usually at the tip of one of the fingers. There are two ways of dealing with this, one for thin leathers and the other for thick. The first method is to cut a scrap of leather slightly larger than the hole. Put the glove on and tuck the small piece of leather under the hole so that it lies smoothly and bind the edges of the hole to the patch with very tiny stitches. If the glove is lined the patch will be tucked between the leather and the lining. If the glove is unlined, turn it inside out and bind the edges of the patch to the wrong side of the leather.

For the second method use matching silk or buttonhole twist and buttonhole very closely and neatly all round the edge of the hole. Go on working, putting the second row into the top loops only of the first row. Continue in this way, going round and round until the hole is completely filled. Take the thread to the inside, and fasten it off very firmly.

Camo fabric and Velcro are two modern materials that you can add to your gloves, if available.

Modern Materials: Even though you may need to make your own gloves at some point, you may still have access to modern materials, such as ripstop nylon, elastic, or Velcro. There is no reason not to incorporate any of these materials into your survival gloves; if you have it, use it.

An excellent material to add to cold-weather gloves and mitts is a thin layer of closed-cell foam, and soft memory foam is even better. If you have (or come across) a memory foam mattress topper, you have enough material to make an entire set of arctic clothing, or enough gloves and survival mitts to outfit a large group.

Arctic survival clothing is made by gluing a layer of memory foam inside oversized clothing, to make arctic boots, pants, shirts, parkas, hoods, and face masks, but that will be another article.

A simple lanyard is a useful addition to your survival mitts, to keep them from getting lost.

So if you should need to make your own gloves, in a long-term survival situation, you can see that it is possible to do so. If you enjoy the process, you might even start making them as trade goods.